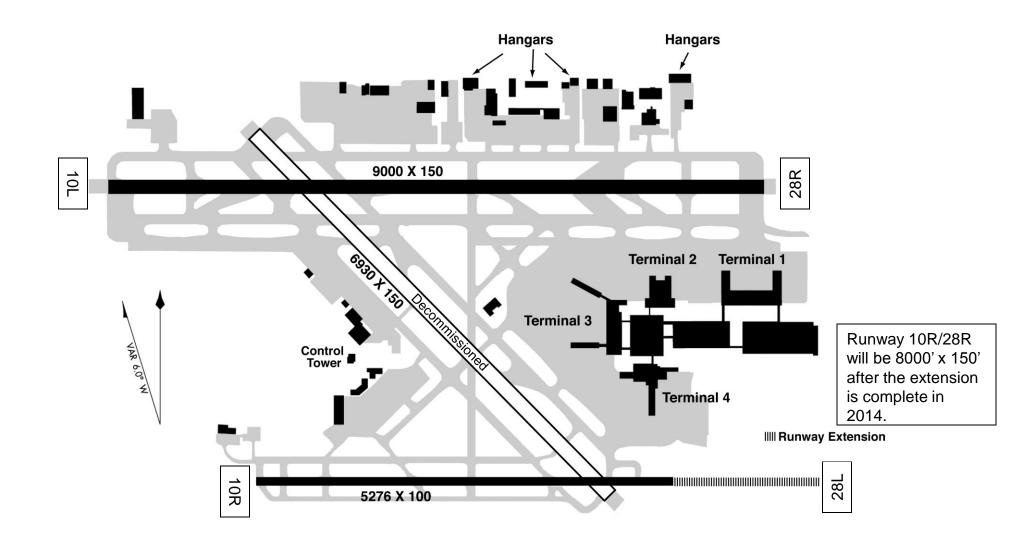
# FORT LAUDERDALE-HOLLYWOOD INTERNATIONAL



Airport capacity profile estimates were created using a standard set of performance characteristics and do not take into account non-runway constraints, unless otherwise noted. The capacity estimates developed for this report are not intended to replace the results of any detailed analysis that would precede an environmental, investment, or policy decision.

The list of Future Improvements and their expected effects on capacity does not imply FAA commitment to, or approval of, any item on the list.

### FORT LAUDERDALE-HOLLYWOOD INTERNATIONAL

#### **DEFINITION**

- The capacity profile shows the hourly throughput that an airport is able to sustain during periods of high demand, represented as the range between the model-estimated capacity and the ATC facility reported rate (called rate). Each weather condition has a unique capacity rate range.
- The following charts compare actual hourly traffic with the estimated capacity curves for FLL. Some hourly traffic points fall outside the estimated capacity curves. There are many reasons why this may occur without affecting operational safety. For example, actual weather may have been better for part of the hour than that recorded for the hour, allowing more efficient ATC procedures than were modeled.

#### **RECENT CAPACITY IMPROVEMENTS AT FLL**

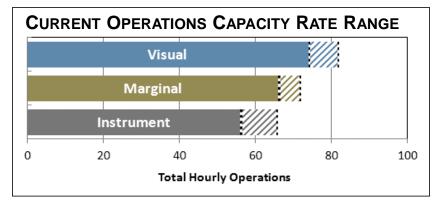
- Implementation of Traffic Management Advisor (TMA) helps to improve the flow of arrivals to the runways.
- High speed exits on Runway 10L/28R.

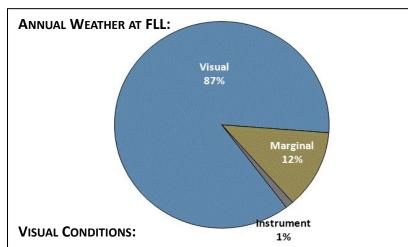
#### **FUTURE IMPROVEMENTS AT FLL**

- Runway Extension: Runway 10R will be extended from 5276 feet to 8000 feet, which will allow a wider range of aircraft to use this runway.
- Improved Parallel Runway Operations: An ILS approach to 10R may allow for independent arrival streams during poor weather conditions.
- Improved Runway Delivery Accuracy: The combined effects of several new capabilities, including ADS-B Out, CDTI, and TBM in the terminal area, will improve the ability of controllers by 2020 to deliver aircraft to the runway with the desired separation from the preceding aircraft. This will reduce the average spacing between arrivals and boost arrival capacity.
- Additional information on these improvements may be found in this report under "Future Operation Assumptions."

#### **DATA SOURCES**

- Actual hourly FLL operations, weather and configuration data were obtained from the FAA ASPM database, and represent operational hours from 7am to 11pm local time for all of Fiscal Years 2009 and 2010. Actual configuration usage is determined by multiple operational factors, including weather conditions.
- Facility reported rates were provided by ATC personnel at FLL.
- Model-estimated rates are derived from operational information provided by ATC.





 Ceiling and visibility allow for visual approaches: at least 2000 feet ceiling and 3 miles visibility

#### **MARGINAL CONDITIONS:**

 Ceiling and visibility below visual approach minima but better than Instrument conditions

#### **INSTRUMENT CONDITIONS:**

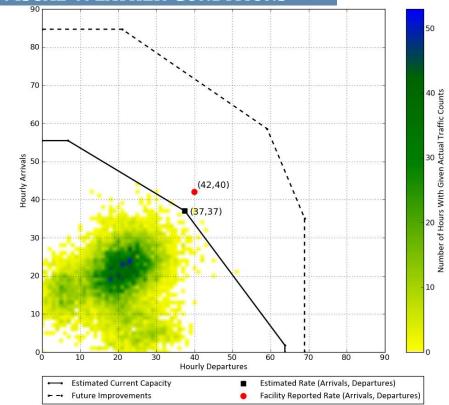
 Ceiling and visibility below 1000 feet ceiling or 3 miles visibility

# **VISUAL**

## FORT LAUDERDALE-HOLLYWOOD INTERNATIONAL

| FLL Scenario  | Arrival<br>Runways | Departure<br>Runways | Procedures                              | Hourly Rate                 |                     |
|---|--------------------|----------------------|---|-----------------------------|---------------------|
|   |                    |                      |   | ATC<br>Facility<br>Reported | Model-<br>Estimated |
| CURRENT OPERATIONS  | 10R, 10L           | 10R, 10L             | Visual Approaches,<br>Visual Separation | 82                          | 74                  |
| NEW RUNWAY Runway Extension   | 10R, 10L           | 10R, 10L             |   | N/A                         | 115                 |
| FUTURE IMPROVEMENTS  Runway Extension Improved Runway Delivery Accuracy | 10R, 10L           | 10R, 10L             |   | N/A                         | 118                 |

#### VISUAL WEATHER CONDITIONS



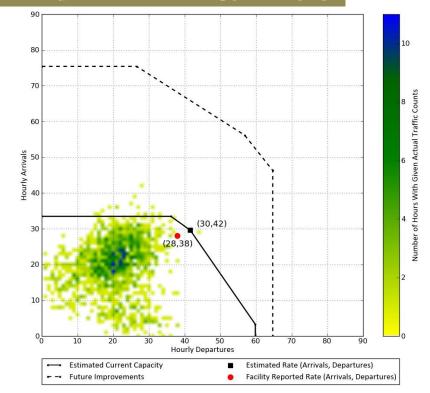
- The capacity rate range in Visual conditions is currently 74-82 operations per hour.
- FLL has two primary directional traffic flows. The airport operates in variations of the profiled configuration approximately 77% of the time in Visual weather conditions (totaling 67% annually).
- Prior to the runway extension, operations on Runway 10R were limited to only aircraft with wingspans of less than 78 feet, approach speeds less than 121 knots, and maximum gross takeoff weight of not more than 58,000 pounds. Many of these are general aviation aircraft operating under VFR. This activity is not reflected in FLL's actual hourly traffic data.
- The departure capacity of Runway 10L is limited by procedures required for abatement of noise by jet departures. Once the extension to Runway 10R is complete, its departure capacity will also be limited by the same noise abatement procedures that currently apply to Runway 10L.
- In the future, the runway extension will allow more traffic to use Runway 10R. It will also reduce the need for general aviation traffic to cross over an active runway to access parking.

# MARGINAL

## FORT LAUDERDALE-HOLLYWOOD INTERNATIONAL

| FLL Scenario   | Arrival<br>Runways | Departure<br>Runways | Procedures  | Hourly Rate                 |                     |
|--|--------------------|----------------------|---|-----------------------------|---------------------|
|  |                    |                      |   | ATC<br>Facility<br>Reported | Model-<br>Estimated |
| CURRENT OPERATIONS   | 10R, 10L           | 10R, 10L             | Instrument Approaches, Radar<br>Separation              | 66                          | 72                  |
| NEW RUNWAY Runway Extension  | 10R, 10L           | 10R, 10L             |   | N/A                         | 103                 |
| FUTURE IMPROVEMENTS  Runway Extension  Improved Parallel Operations  Improved Runway Delivery Accuracy | 10R, 10L           | 10R, 10L             | Independent Instrument<br>Approaches, Visual Separation | N/A                         | 110                 |

### **MARGINAL WEATHER CONDITIONS**



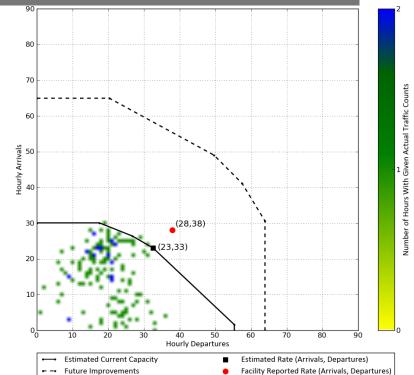
- The capacity rate range in Marginal conditions is currently 66-72 operations per hour.
- FLL has two primary directional traffic flows. The airport operates in variations of the profiled configuration approximately 78% of the time in Marginal weather conditions (totaling 10% annually).
- Prior to the runway extension, operations on Runway 10R were limited to only aircraft with wingspans of less than 78 feet, approach speeds less than 121 knots, and maximum gross takeoff weight of not more than 58,000 pounds.
- The departure capacity of Runway 10L is limited by procedures required for abatement of noise by jet departures. Once the extension to Runway 10R is complete, its departure capacity will also be limited by the same noise abatement procedures that currently apply to Runway 10L.
- In the future, the runway extension will allow more traffic to use Runway 10R.
- Peak arrival capacity is estimated to increase as future improvements are implemented.

# **Instrument**

## FORT LAUDERDALE-HOLLYWOOD INTERNATIONAL

| FLL Scenario   | Arrival<br>Runways | Departure<br>Runways | Procedures   | Hourly Rate                 |                     |
|--|--------------------|----------------------|--|-----------------------------|---------------------|
|  |                    |                      |  | ATC<br>Facility<br>Reported | Model-<br>Estimated |
| CURRENT OPERATIONS   | 10L                | 10R, 10L             | Instrument Approach,<br>Radar Separation               | 66                          | 56                  |
| NEW RUNWAY Runway Extension  | 10R, 10L           | 10R, 10L             | Dependent Instrument<br>Approaches, Radar Separation   | N/A                         | 95                  |
| FUTURE IMPROVEMENTS  Runway Extension Improved Parallel Operations Improved Runway Delivery Accuracy | 10R, 10L           | 10R, 10L             | Independent Instrument<br>Approaches, Radar Separation | N/A                         | 99                  |





- The capacity rate range in Instrument conditions is currently 56-66 operations per hour.
- FLL has two primary directional traffic flows. The airport operates in variations of the profiled configuration approximately 54% of the time in Instrument weather conditions (totaling less than 1% annually).
- Prior to the runway extension, operations on Runway 10R were limited to only aircraft with wingspans of less than 78 feet, approach speeds less than 121 knots, and maximum gross takeoff weight of not more than 58,000 pounds.
- The departure capacity of Runway 10L is limited by procedures required for abatement of noise by jet departures. Once the extension to Runway 10R is complete, its departure capacity will also be limited by the same noise abatement procedures that currently apply to Runway 10L.
- In the future, the runway extension will allow more traffic to use Runway 10R.
- Peak arrival capacity is estimated to increase as future improvements are implemented.